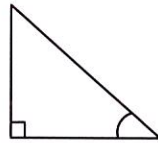
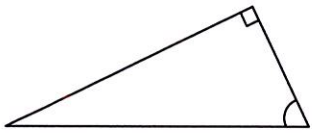


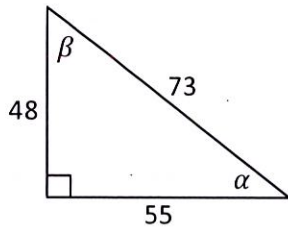
Trigonometry Review

Part 1: You should be able to label all sides and angles in a right triangle.

Label in the triangles below: *theta*, *opposite*, *adjacent*, *hypotenuse*



Part 2: You should be able to find the sine, cosine, or tangent proportions from a triangle.



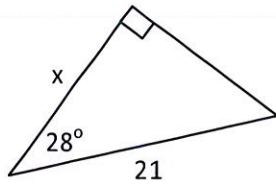
$$\sin(\alpha) = \underline{\hspace{2cm}} \quad \sin(\beta) = \underline{\hspace{2cm}}$$

$$\cos(\alpha) = \underline{\hspace{2cm}} \quad \cos(\beta) = \underline{\hspace{2cm}}$$

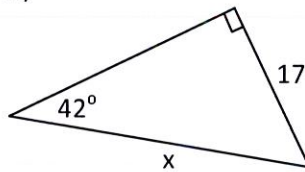
$$\tan(\alpha) = \underline{\hspace{2cm}} \quad \tan(\beta) = \underline{\hspace{2cm}}$$

Part 3: You should be able to find missing sides of a triangle using trig.

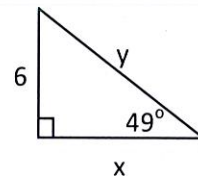
1.)



2.)

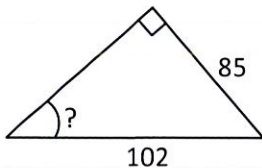


3.) Find the perimeter.

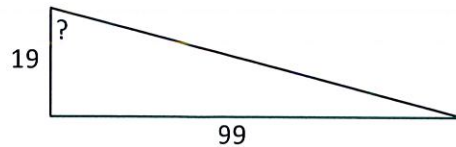


Part 4: You should be able to find missing angles of a triangle using inverse trig.

4.)

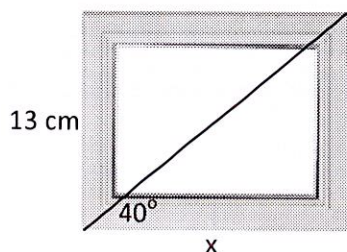


5.)

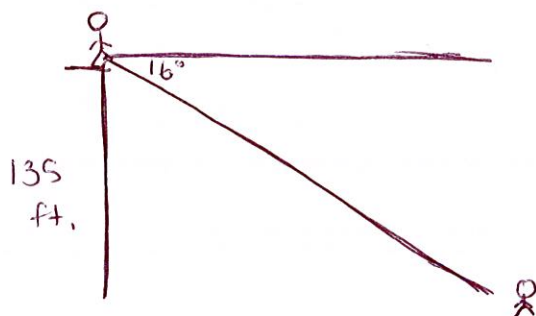


Part 5: You should be able to apply all topics of this unit to word problems.

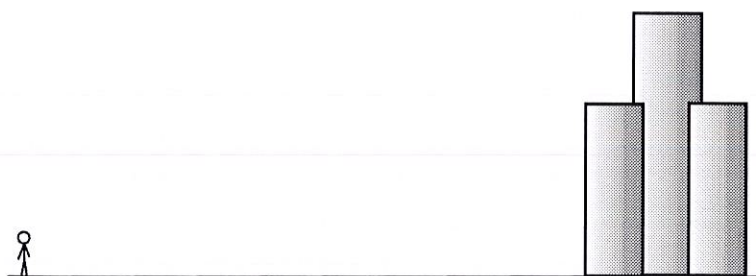
6.) A photo frame has the dimension below. Find the width of the frame.



7.) A man standing on the top of a 135 foot cliff looks down at an angle of 16° and sees his friend walking near the bottom. What is the distance between the man and his friend?



8.) You are standing on the ground 700 meters away from Detroit's tallest building, the Renaissance Center. You look up at an angle of 17.6° and see the top. How tall is the building?



9.) A new ramp is being constructed that goes 10 feet horizontally while raising 2 feet vertically. What is the angle of the ramp?

Solutions

Part 2

$$\sin(\alpha) = \frac{48}{73}$$

$$\cos(\alpha) = \frac{55}{73}$$

$$\tan(\alpha) = \frac{48}{55}$$

$$\sin(\beta) = \frac{55}{73}$$

$$\cos(\beta) = \frac{48}{73}$$

$$\tan(\beta) = \frac{55}{48}$$

Part 3

$$1.) 18.5$$

$$2.) 25.4$$

$$3.) x = 5.2,$$

$$y = 7.9,$$

$$\text{perimeter} = 19.1$$

Part 4

$$4.) 56.4^\circ$$

$$5.) 79.1^\circ$$

Part 5

$$6.) 15.5 \text{ cm}$$

$$7.) 140.4 \text{ ft}$$

$$8.) 222.1 \text{ meters}$$

$$9.) 11.3^\circ$$